Amendments to the Specification

Please replace paragraph **[0017]** with the following rewritten paragraph:

[0017] On the contrary, during the operated condition of the coil 84 (on condition), an armature 88 is moved by the magnetic power of the coil 84, and the valve member 80 which moves with the armature 88 is contacted to the valve seat 82. At that time, the valve member 80 is pushed by the attraction force F1′ based on the magnetic power of the coil 84, the sum of the power, which is the pressure difference operating force F2′ based on the difference between the fluid pressure of the brake cylinder and the master cylinder and the bias force F3′ of the spring 86.

Please replace paragraph **[0018]** with the following rewritten paragraph:

[0018] When the attraction force F1′ is larger than the sum of the pressure difference operating force F2′ based on the difference between the fluid pressure of the brake cylinder and the master cylinder, if the formula $F2' \leq F1' - F3'$ is satisfied, the valve member 80 is contacted to the valve seat 82, and the drain of the operating fluid from the brake cylinder is interrupted. The fluid pressure of the brake cylinders 56 is increased, because the operating fluid of high pressure being supplied by the pump 74, and it can be raised more than the fluid pressure of the master cylinder 14.

Please replace paragraph **[0019]** with the following rewritten paragraph:

[0019] The pressure difference operating force F2′ becomes higher with an increase of the fluid pressure of the brake cylinder, and if the formula $F2' > F1' - F3'$ is satisfied, the valve member 80 is unseated from the valve seat 82. The operating fluid of the brake cylinders 56 is returned to the master cylinder 14, and it is decreased. In this formula, if the bias force F3′ is ignored, the fluid pressure of the brake cylinder is controlled to the pressure based on the pressure difference of the attraction force F1′, it is higher than the fluid pressure of the brake. In addition, the relative position of the valve member 80 against the valve seat

82 may be decided by the pressure difference operating power, the attraction force and the bias force, therefore, the distance between these elements, i.e., the opening degree, can be controlled by the control of the attraction force. The amount of the attraction force F1', which is the magnetic power of the coil 84, is designed to change linearly corresponding to the amount of the exciting current I of the coil 84.

Please replace paragraph **[0044]** with the following rewritten paragraph:

[0044] As shown in FIG. 9, if the master pressure PM0, at the time that the brake operating power is the first predetermined operation power F0, becomes higher than the first predetermined fluid pressure Pth1, it is the normal condition ~~or the small amount fluid leakage failure~~ (without the assist control). If the master pressure PM0 becomes smaller than the first predetermined fluid pressure Pth1, it is the servo function failure ~~or the small amount leakage failure~~ (booster failure).

Please replace paragraph **[0046]** with the following rewritten paragraph:

[0046] When the booster 12 is in the normal condition, the brake operating power and the assistance power of the booster 12 are added to the output member ~~11~~ in the booster 12, and the output of the output member ~~11~~ is added to the pressure piston ~~14b~~ in the master cylinder 14. In the booster 12, if the brake operating power added to the input member 13 through the brake pedal 10 becomes larger than the power based on the set load of the return spring of the input member 13, the input member is moved against the power of the return spring, the control valve is placed in the operating condition, and the power piston generates the assistance power. In the master cylinder 14, if the output power added to the pressure piston becomes bigger than the power based on the set load of the return spring of the master cylinder 14, the pressure piston is moved against the power of the return spring , and the fluid pressure is generated in the pressure chamber.

Please replace paragraph **[0051]** with the following rewritten paragraph:

[0051] The bottoming condition β is the condition in which, in the master cylinder 14, (1) the front pressure piston of the two pressure pistons is contacted to the stopper 19 of the master cylinder 14 (it also may be the bottom part of the master cylinder), (2) the rear pressure piston is contacted to the front pressure piston 14a, or (3) both conditions (1) and (2) occur (the front pressure piston is contacted to the master cylinder and the rear pressure piston is contacted to the front piston).

Please replace paragraph **[0054]** with the following rewritten paragraph:

[0054] Furthermore, the bottoming condition may happens because of the fluid leakage, but the bottoming condition does not cause the fluid leakage. ~~The~~ If the fluid leakage causes the bottoming condition; therefore if the bottoming condition is detected, then the fluid leakage can be detected. As described above, the bottoming condition can be detected, even if the master pressure is a very small value, in spite of that the brake operation power is big, but, as shown in FIG. 12, it also can be detected based on the changing condition of the operating power, the stroke, the master pressure and the pressure of the vacuum chamber (hereafter abbreviated to the "booster pressure").

Please replace paragraph **[0060]** with the following rewritten paragraph:

[0060] As shown in (d) of FIG. 12, in the brake system in which the fluid leakage is not occurring, when the bottoming condition occurs, the master pressure is increased rapidly based on the increasing of the brake operation power. As shown in (e) of FIG. 12, in the brake system which the fluid leakage is occurring, the master pressure is decreased rapidly. Therefore, if the decreasing gradient of the master pressure is larger than the predetermined decreasing gradient, the bottoming condition can be detected. Also, when the decreasing gradient of the master pressure is larger than the predetermined gradient in the bottoming condition and the amount of the fluid leakage is small, it is not always larger than the

08 Cont'd

predetermined gradient when the amount of the fluid leak is large because, as shown in FIGS. 11 and 12, the master pressure is also very small before the bottoming condition when the amount of the fluid leakage is large.

Please replace paragraph **[0065]** with the following rewritten paragraph:

[0065] Next, in step S23, it is judged whether the increasing gradient of the operation power is larger than the predetermined increasing gradient α. This judges whether it is the bottoming condition β or the quasi-bottoming condition. When the increasing gradient of the operation power is larger than the predetermined increasing gradient, in step S24, it is judged whether the passing time after the above condition is satisfied is beyond the predetermined time. If the passing time is shorter than the predetermined time, the judgment becomes NO, and it is returned to step S21, and from step S21 to step S24 are carried out repeatedly until the passing time is beyond the predetermined time T.

09

Please replace paragraph **[0066]** with the following rewritten paragraph:

[0066] When it passes the predetermined time T after the judgment in step S23 becomes YES, the judgment in step S24 becomes YES, and it is judged whether the operation power is larger than the second predetermined operation power F2 in step S25. When it is larger than the second predetermined operation power F2, the master pressure is read in step S26, and it is judged whether the master pressure PM2 is smaller than the second predetermined fluid pressure Pth2. When it is higher than the second predetermined fluid pressure Pth2, the judgment becomes NO, and in step S27, it detects that the servo function failure occurs during the brake operation, when it is smaller than the second predetermined fluid pressure Pth2, it detects that it is the fluid leakage failure. In this case, the actual bottoming condition is detected, it is judged whether the master pressure PM0 is smaller than the first predetermined fluid pressure Pth1 in step S28. When it is smaller than the first predetermined fluid pressure Pth1 in step S29, it is determined to be a large fluid leakage

10

P10 Cont'd

failure, when it is higher than the first predetermined fluid pressure Pth1, it is determined to be a ~~small fluid leakage failure~~ in step S30.

Please replace paragraph **[0070]** with the following rewritten paragraph:

[0070] If the servo function failure is detected, the judgment of step S53 becomes YES, the brake fluid pressure is controlled by the first compressing device 150 in step S54 through step S56. The target pressure P* is set when the servo ratio is constant. It is set to the value of the booster 12 in the normal condition, or after the booster 12 reaches the limitation point of the brake power assistance, it is set to the value which is determined by the normal condition brake control, hereafter abbreviated to the target pressure of the normal condition. When the servo function failure occurs, the master pressure becomes ~~a little small~~ smaller, but since the fluid leakage does not occur, the brake fluid pressure can be controlled to the same value of the target fluid pressure P*.

P11